CCRPC Bicycle and Pedestrian Counts
Program Overview

There are three main ways in which CCRPC has collected and continues to collect Bicycle information in and around the City of Burlington. Below is a brief overview of the three data collection models including insights into their benefits and limitations.

Automated Traffic Recording

In years past, our Automated Traffic Recorders (ATRs) did not count cyclists. New versions of this unit were enhanced to include the ability to count cyclists. CCRPC purchased one of these *Cycles Plus* ATRs and counted 6 locations during the 2014 count season. Outside of these 6 locations, CCRPC has not historically used ATRs to count cyclists. In reviewing early results, I was concerned with the Cycles Plus ATRs ability to effectively count cyclists. It had seemed to be under counting, so I worked with the TRC to set up a video detection device at the ATR location. CCRPC has not reviewed all of the data, but we have confirmed that it is undercounting cyclists. Having said that, we are looking to complete this QC process, and begin another testing environment (probably on North Ave) to continue to hone in on something like an adjustment factor. There are also some resources that have recently been put out by the NCHRP which may explain these issues further and provide guidance on them. I have not reviewed them yet.

Infrared Bike/Ped Counters

CCRPC currently works with Eco-Counter (link) for our bike/ped counts on separated shared use paths. We rotate these three devices throughout our county on an as needed basis. The main limitations lie in how it actually counts bicyclists or pedestrians. Because it is simply an infrared beam that is triggered by someone (or thing) crossing it, it has no way of distinguishing between modes of travel (biking or walking). 5 different locations in Burlington have been counted at various times and lengths since 2009.

Turning Movement Counts

Turning movement counts typically take place at roadway intersections and are conducted during normal peak hours (7-9 am, 4-6 pm) during weekdays only. Although this count is mainly used to monitor directionality of vehicle travel, it also encompasses pedestrian information (by crosswalk) as well as roadway cyclist travel (by approach). These totals are summarized by 15 minute bins. Occasionally, a 12 hour count will be performed using the same data model described above. CCRPC has been using this data model since 2008 and has derived a bike/ped specific dataset (current through 2013) that describes a basic level of information. More work on this dataset is needed to extrapolate on the current source data, and update it for 2014. The table provided dates back to 2012. TM count locations from 2008-2011 are available on our website (we are phasing this service out).

Manual Counts

Manual bike/ped counts are often used in environments that don't easily fit into any of the above data collection models. Often times information like the presence or absence of helmets will be monitored, as this information is only able to be collected with a manual count. These counts are always customized to measure specific information in a unique situation. Historically, CCRPC conducts manual counts infrequently.

Data Tables

Turning Movement Count Locations

Location	ID	Duration	Date
COLCHESTER AVE AND BARRETT ST	BURL03	Peak Hour	Wednesday, July 16, 2014
COLCHESTER AVE AND MILL/US7	BURL14	Peak Hour	Tuesday, August 05, 2014
COLCHESTER AVE AND CHASE ST	BURL111	Peak Hour	Tuesday, July 29, 2014
CHASE ST AND BARRETT ST	BURL112	Peak Hour	Tuesday, August 19, 2014
RIVERSIDE AND BARRETT ST	BURL113	Peak Hour	Tuesday, August 05, 2014
Pearl St and Battery Street	BURL08	12 hour	Thursday, June 5th, 2014
Pearl Street and North Champlain Avenue	BURL47	Peak Hour	Tuesday, July 08, 2014
Pearl Street and Pine Street	BURL51	Peak Hour	Tuesday, July 08, 2014
Pine Street and Home Avenue	BURL63	Peak Hour	Wednesday, June 25, 2014
Pine Street and Kilburn Street	BURL55	Peak Hour	Tuesday, June 24, 2014
Pine Street and Howard Street	BURL64	Peak Hour	Wednesday, June 25, 2014
Pine Street and Locust Street	BURL77	Peak Hour	Wednesday, August 13, 2014
Pine Street and Lakeside Avenue	BURL27	Peak Hour	Wednesday, August 13, 2014
Pine Street and Flynn Avenue	BURL22	Peak Hour	Wednesday, June 11, 2014
Pine Street and Main Street	BURL30	Peak Hour	Thursday, June 5th, 2014
N/S Winooski and Pearl St	BURL50	Peak Hour	Tuesday, July 22, 2014
N. Winooski Ave and US 7/Riverside Ave	BURL82	Peak Hour	Wednesday, July 23, 2014
N. Winooski Ave and Archibald	BURL01	Peak Hour	Thursday, July 24, 2014
S. Winooski Ave and Spruce St	BURL09	Peak Hour	Thursday, August 14, 2014
S. Winooski Ave and Adams	BURL102	Peak Hour	Tuesday, July 22, 2014
S. Winooski Ave and King St	BURL101	Peak Hour	Tuesday, July 29, 2014
S. Winooski Ave and Cherry St	BURL58	Peak Hour	Wednesday, July 23, 2014
S. Winooski and Maple St	BURL18	Peak Hour	Tuesday, August 19, 2014
S. Union and Maple St	BURL67	Peak Hour	Thursday, July 24, 2014
Spring St and Archibald	BURL108c	Peak Hour	Thursday, May 30th, 2013
Archibald and Walnut	BURL85c	Peak Hour	Thursday, May 30th, 2013
Walnut and Spring St.	BURL110c	Peak Hour	Thursday, May 30th, 2013
Spring St. and Elmwood	BURL109c	Peak Hour	Thursday, May 30th, 2013
Pearl/Colchester and N/S Prospect	BURL52a	Peak Hour	Wednesday, August 14, 2013
Pearl/Colchester and N/S Prospect	BURL52	Custom	Wednesday, October 16, 2013

Spring St and Archibald	BURL108e	Peak Hour	Wednesday, July 31st
Archibald and Walnut	BURL85e	Peak Hour	Wednesday, July 31st
Walnut and Spring St.	BURL110e	Peak Hour	Wednesday, July 31st
Spring St. and Elmwood	BURL109B	Peak Hour	Wednesday, July 31st
Spring St. and Elmwood	BURL109A	Peak Hour	Wednesday, July 31st
North Ave and Ethan Allen Park	BURL108	Peak Hour	Thursday, September 13, 2012
North Ave amd Woodbury Road	BURL42	7-9 AM and 2-6 pm	Thursday, September 13, 2012
North Ave and Plattsburgh/Tracy	BURL39	7-9 AM and 2-6 PM	Wednesday, September 11, 2013
Heinberg Rd & Shore Rd/North Ave	BURL41	Peak Hour	Wednesday, September 11, 2013
Pearl/Colchester - N/S Prospect	BURL52	7:15-8:45, 4::30-6:00	Wednesday, October 31, 2012
MAIN ST / S. WINOOSKI AVE	BURL35	12 hour	Thursday, June 28, 2012
N WILLARD / NORTH ST	BURL44	Peak Hour	Wednesday, July 25, 2012
US 7 & LEDGE / LOCUST & S WILLARD	BURL83	12 hour	Thursday, July 26, 2012

ATR Locations

Year	**Location**	**ID**
2014	Pearl Street across from Three Needs	BURL105
2014	S Winooski north of Elm Terrace	BURL106
2014	N Union by Grant St	BURL107
2014	N Winooski between Grant & North St	BURL108
2014	Pine St between Kilburn & Pine Place	BURL109
2014	N CHAMPLAIN ST 200 FT N OF PERU	BURL110
2014	N CHAMPLAIN ST BETWEEN MYRTLE AND CEDAR	BURL111

Bike Ped IR Count Locations

Location	**Last Count**	**ID**
Waterfront Park/Burlington bikeway Just South of Lake St. Crossing	Dec, 2014	BURL01A
Pedestrian way between Hilton and Chittenden just East of parking garage entrance	Apr, 2011	BURL02B
Burlington Bikeway intersection of Shore Road	Aug, 2009	BURL05
Burlington Bikeway at Oakledge Park Southern entrance from Austin Drive	Aug , 2011	BURL08A
Top of Church St intersection with Pearl Street	Jun, 2011	BURL101

Riverside Ave path south of Salmon Hole Park	Sept, 2010	BURL12

2015 Count Season - Moving forward. . .

Automated Traffic Recording

CCRPC will hopefully have 2 bicycle specific ATRs for the 2015 count season and will continue to cyclically place these on established on road bicycle routes and in various locations in and around the city of Burlington. It would be reasonable to estimate the same number of locations, at a minimum, of last year (a total of 6).

Infrared Bike/Ped Counters

No locations for any of the three Infrared counts have been selected yet, but CCRPC is willing to select one location within the City of Burlington. CCRPC will work with City planners and determine the best location for this device. This device should be set up for at least 3 months. ATRs can also be used on separated shared use paths if a distinction between cyclists and pedestrians is needed, or if accuracy of data collection comes into question.

Turning Movement Counts

CCRPC still needs to work with the State AOT (VTrans) regarding adjustments to the Turning Movement Count data model, but there is a strong likelihood that it will move to one in which counts cyclists' directionality, as well as just volume approach totals. This data model, assuming it is decided upon, will be used in all TM counts moving forward, unless otherwise stated. There are a planned 14 locations for TM/manual bike/ped counts in Burlington this coming count season.

Manual Counts

Manual counts will be performed on an as needed basis. Specific attention is being given to the North Ave corridor and manual counts may be performed instead of a true Turning Movement Count. There are a planned 14 locations for TM/manual bike/ped counts in Burlington this coming count season.